

ABSTRACT

The present invention relates generally to nucleobase polymer functionalizing reagents, to mobility-modified sequence-specific nucleobase polymers, to compositions comprising a plurality of mobility-modified sequence-specific nucleobase polymers, and to the use of such polymers and compositions in a variety of assays, such as, for example, for the detection of a plurality of selected nucleotide sequences within one or more target nucleic acids. The mobility-modifying polymers of the present invention include phosphoramidite reagents which can be joined to other mobility-modifying monomers and to sequence-specific oligonucleobase polymers *via* uncharged phosphate triester linkages. Addition of the mobility-modifying phosphoramidite reagents of the present invention to oligonucleobase polymers results in unexpectedly large effects the mobility of those modified oligonucleobase polymers, especially upon capillary electrophoresis in non-sieving media.

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